

REMARKS

By the present amendment, claim 1 has been amended to incorporate the subject matter of claim 28. Accordingly, claims 8, 17, and 28-31 have been canceled.

It is submitted that the amendment essentially incorporates a dependent claim and do not raise any new issues. Accordingly, entry and consideration of the amendment is respectfully requested.

Claims 1-3, 5-7, 11-12, 15-16, and 22-27 are pending in the present application. Claim 1 is the only independent claim.

I. Double patenting rejection

In the Office Action, claims 1-3, 5-8, 11-12, 15-17, and 22-31 are rejected under the judicially-created doctrine of obviousness-type double-patenting over claims 1-3 and 11-12 of U.S. Appl. No. 10/541,202.

A Terminal Disclaimer with respect to this application is being submitted in U.S. Appl. No. 10/541,202.

Accordingly, it is submitted that the rejection should be withdrawn.

II. Art rejection over Fan

In the Office Action, claims 1-3, 5-8, 11, 15, 17, and 22-31 are rejected under 35 U.S.C. 102(e) as anticipated by US 7,429,062 to Fan et al. ("Fan").

Further, claims 12 and 16 are rejected under 35 U.S.C. 103(a) as obvious over Fan in view of U.S. 5,449,200 to Andric et al. ("Andric").

Still further, claims 22-27 are also rejected under 35 U.S.C. 103(a) as obvious over Fan in view of Andric.

Reconsideration and withdrawal of the rejections is respectfully requested.

First, Fan discloses printed indicia 16, 20 on both sides of a document but “[t]he lines 20 of the second pattern 12 on the back surface 22 of document 14 are a mirror image, sometimes referred to as a reverse image, of the lines 16 of the first pattern 10 on the front surface 18 of document 14” (Fan at col. 3, lines 18-20). According to Fan an observer “will ‘see through’ the document 14 and view the second pattern 12 of lines 20 superimposed on the first pattern 10 of lines 16” (Fan at col. 3, lines 54-56). In other words, the indicia 16 and 20 are exactly superposed, so that the indicia on each side form the complete same image, and the same image is seen when observed from each side both in reflected light and in transmitted light.

Second, the image of Fan is not a 3D image. Fan discloses that “[t]he first and second pattern defines recognizable patterns (such as security patterns) or images such as geometric shapes, graphic illustrations, alphanumeric characters and other curvilinear patterns” (Fan at col. 4, lines 59-61). However, the only embodiments provided do not provide any visualization of depth or relief in the image, such as a perspective view. Rather, they are simple designs formed of a simple arrangement of straight or circular lines forming a strictly two-dimensional, i.e., flat-looking, image. (see, e.g., Figs. 4 and 8 of Fan).

Further, even if arguendo, an attempt were to be made at counterfeiting the document of Fan, this would result in replacing the two-dimensional pattern by a conventional, two-

dimensional “moiré” pattern (see Fan at col. 3, lines 60-64 and Figs. 5-7). In other words, not only the image would be lost, but no image having depth or relief effect would be generated.

In contrast, in the presently claimed invention, as recited in present claim 1:

(1) the first set of lines and the second set of lines complement each other to constitute the image so that the image with a 3D effect is visible observed in transmitted light but not visible observed in reflected light, and

(2) the image includes a 3D effect that is a relief or volume effect created by the planar arrangement of the first and second sets of lines observed in accurate registration in transmitted light, whereas the 3D effect would not be present if the first and second sets of lines were not in accurate registration.

An advantage of the presently claimed invention is that it is possible to identify an authentic security document by the accurate registration of the complementary lines much more easily than in Fan. In particular, the lack of accurate registration can be more easily noticeable in the presently claimed invention because (1) inaccurate registration in an inauthentic reproduction will result in the first and second set of lines not being complementary to each other, so the image will not be visible, and (2) the fact that the image includes a 3D effect can make the lack of accurate registration more easily observable, in particular to the human eye. Namely, an inaccurate registration will distort the 3D effect (for example, distortion of a perspective effect) in a manner that will be even easier to perceive than a distortion of a two-dimensional, flat-looking image.

The features of the presently claimed invention are not taught or suggested in Fan, and the other references fail to remedy this deficiency of Fan. Therefore, the present claims are not anticipated by Fan, and not obvious over Fan taken alone or in any combination with the other cited references.

In addition, with respect to the dependent claims, it is submitted that the combined features of each of the dependent claims are not taught or suggested in the cited references taken alone or in any combination.

In particular, with respect to claim 6, it is submitted that Fan does not have lines of the image that are printed such that two adjacent lines of the image are always such that one of the lines is on one side and the next line is on the reverse side. Printing the lines in this way makes it even easier to perceive a distortion due to inaccurate registration, especially in an image including a 3D effect.

Further, the other cited references fail to remedy the deficiencies of Fan.

Therefore, each of the dependent claims, and in particular claim 6, is not obvious over Fan taken alone or in any combination with the other cited references.

In view of the above, it is submitted that the rejections should be withdrawn.

III. Art rejection over Andric

In the Office Action, claims 1-3, 5-8, 11-12, 15-17, and 22-31 are rejected under 35 U.S.C. 103(a) as obvious over US 5,449,200 to Andric et al. (“Andric”).

Reconsideration and withdrawal of the rejection is respectfully requested.

Andric discloses a multi-ply security paper with a substrate 14 sandwiched between two plies of paper 12 and 16. The substrate has indicia 18 that are invisible in reflected light, but cooperate with surface indicia 20 or 22 on the outer surface of the paper plies 12 or 16, respectively, when observed in transmitted light.

However, (1) Andric does not disclose lines 20 and 22 that complement each other to constitute an image having a 3D effect visible observed in transmitted light but not visible observed in reflected light, and (2) Andric does not disclose three-dimensional volume or relief effect, and such effect is not inherent in the variety of embodiments disclosed in Andric. Further, it is submitted that such features would not be obvious variants based on Andric.

More precisely, in Andric, when the paper is observed from one side, the surface indicia on the opposite side are not visible, even in transmitted light. Specifically, Andric states that “[t]he total image observed emerging from the security paper 10 in transmitted light is, therefore, a combination of the image created by the substrate indicia 18 and the surface indicia 20” (Andric at col. 11, lines 48-52 and Fig. 1). In other words, the “total image” of Andric is the combination only of the surface indicia 20 on the side being observed and the inside indicia 18. This is also the case for the embodiments of Figs. 3 and 3 of Andric (see Andric at col. 12, lines 13-18 and 28-31).

Further, Andric focuses on the indicia 18 as the source of authentication by alteration of the image formed by the surface indicia on one side of the paper, when seen in transmitted light. As a result, Andric does not provide any motivation or incentive to modify the surface indicia on

the opposite side of the paper as a source of authentication by altering the image when seen in transmitted light, irrespective of the effect of the indicia 18.

In contrast, in the presently claimed invention, as recited in present claim 1:

(1) the first set of lines and the second set of lines complement each other to constitute the image so that the image with a 3D effect is visible observed in transmitted light but not visible observed in reflected light, and

(2) the image includes a 3D effect that is a relief or volume effect created by the planar arrangement of the first and second sets of lines observed in accurate registration in transmitted light, whereas the 3D effect would not be present if the first and second sets of lines were not in accurate registration.

An advantage of the presently claimed invention is that it is possible to identify an authentic security document by the accurate registration of the complementary lines much more easily than in Andric. In particular, the lack of accurate registration can be more easily noticeable because (1) inaccurate registration will result in the first and second set of lines not being complementary to each other, so the image will not be visible, and (2) the fact that the image includes a 3D effect can make the lack of accurate registration more easily observable, in particular to the human eye. Namely, an inaccurate registration will distort the 3D effect (for example, distortion of a perspective effect) in a manner that will be even easier to perceive than a distortion of a two-dimensional, flat-looking image.

In addition, the first and second sets of lines of the presently claimed invention can be applied as surface indicia much more easily than the inside indicia 18 of Andric, while providing the improved authentication as discussed above.

The features of the presently claimed invention are not taught or suggested in Andric. Therefore, the present claims are not anticipated by Andric, and not obvious over Andric.

In addition, with respect to the dependent claims, it is submitted that the combined features of each of the dependent claims are not taught or suggested in the cited references taken alone or in any combination.

In particular, with respect to claim 6, it is submitted that Andric does not have lines of the image that are printed such that two adjacent lines of the image are always such that one of the lines is on one side and the next line is on the reverse side.

Further, the other cited references fail to remedy the deficiencies of Andric.

Therefore, each of the dependent claims, and in particular claim 6, is not obvious over Andric taken alone or in any combination with the other cited references.

In view of the above, it is submitted that the rejection should be withdrawn.

Conclusion

In conclusion, the invention as presently claimed is patentable. It is believed that the claims are in allowable condition and a notice to that effect is earnestly requested.

If there is, in the Examiner's opinion, any outstanding issue and such issue may be resolved by means of a telephone interview, the Examiner is respectfully requested to contact the undersigned attorney at the telephone number listed below.

Application No. **10/521,555**
Art Unit: **1794**

Amendment under 37 CFR §1.116
Attorney Docket No.: **052014**

If this paper is not considered to be timely filed, the Applicants hereby petition for an appropriate extension of the response period. Please charge the fee for such extension and any other fees which may be required to Deposit Account No. 50-2866.

Respectfully submitted,
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